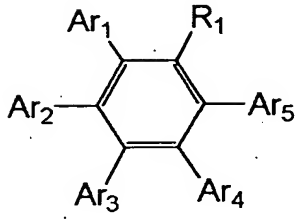
CLAIMS

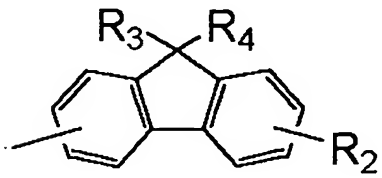
1. A condensed polycyclic compound represented by general formula [I]:



[I]

wherein R_1 is hydrogen, halogen, cyano, a substituted amino or a group selected from the group consisting of alkyl, aralkyl, aryl, heterocyclic, each having no substituent or a substituent; and Ar_1 to Ar_5 are the same or different and are each independently a condensed polycyclic aromatic group or a condensed polycyclic heterocyclic group, each having no substituent or a substituent.

2. The condensed polycyclic compound according to claim 1, wherein at least one of Ar_1 to Ar_5 is a condensed polycyclic aromatic group represented by general formula [III]:

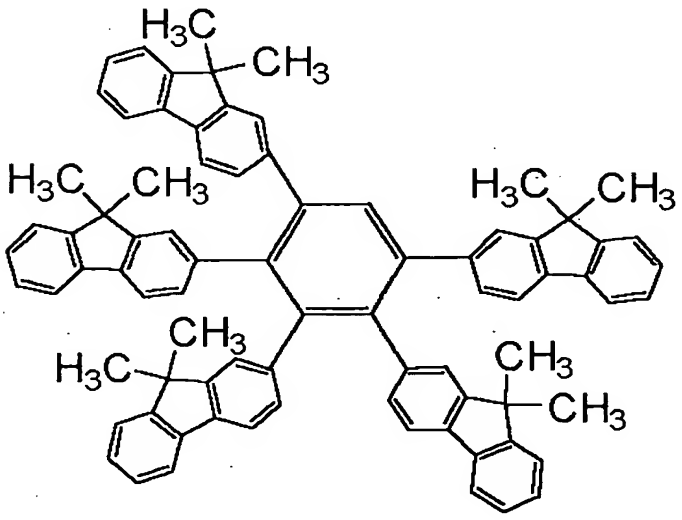


[III]

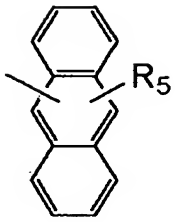
wherein R_2 is hydrogen, halogen, cyano, a substituted

amino or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; and R_3 and R_4 are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent.

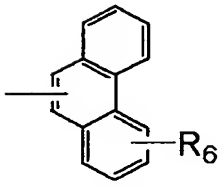
3. The condensed polycyclic compound according to claim 2 represented by the following structural formula.



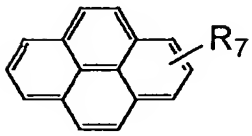
4. The condensed polycyclic compound according to claim 1, wherein at least one of Ar_1 to Ar_5 is a condensed polycyclic aromatic group represented by any of general formulas [IV] to [VII]:



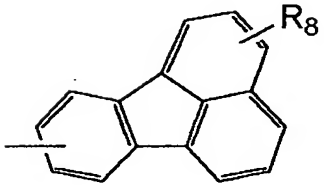
[IV]



[V]



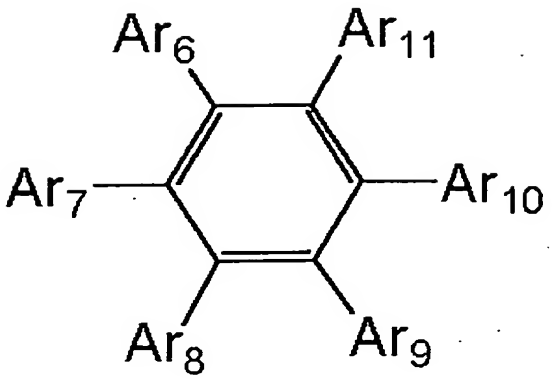
[VI]



[VII]

wherein R_5 to R_8 are hydrogen, halogen, cyano, a substituted amino or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent.

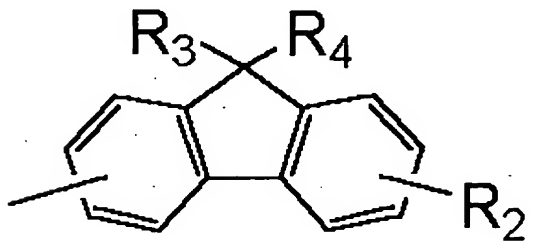
5. A condensed polycyclic compound represented by general formula [II]:



[I I]

wherein Ar_6 to Ar_{11} are the same or different and are each independently a group selected from the group consisting of condensed polycyclic aromatic groups and condensed polycyclic heterocyclic groups, each having no substituent or a substituent.

6. The condensed polycyclic compound according to claim 5, wherein at least one of Ar_6 to Ar_{11} is a condensed polycyclic aromatic group represented by general formula [III]:

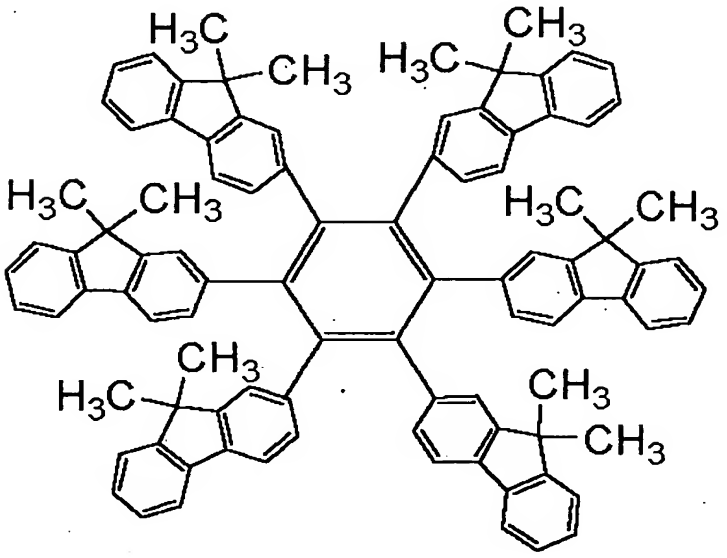


[I I I]

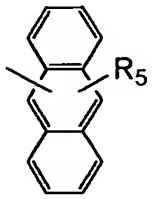
wherein R_2 is hydrogen, halogen, cyano, a substituted amino or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having

no substituent or a substituent; and R_3 and R_4 are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent.

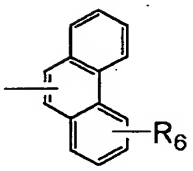
7. The condensed polycyclic compound according to claim 6 represented by the following structural formula.



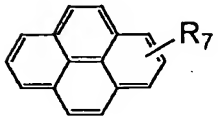
8. The condensed polycyclic compound according to claim 5, wherein at least one of Ar_1 to Ar_5 is a condensed polycyclic aromatic group represented by any of general formulas [IV] to [VII]:



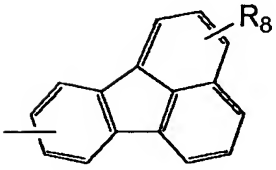
[IV]



[V]



[VI]



[VII]

wherein R_5 to R_8 are hydrogen, halogen, cyano, a substituted amino or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent.

9. An organic light-emitting device comprising a pair of electrodes consisting of an anode and a cathode and one or a plurality of organic compound-containing layers sandwiched between the pair of

electrodes, wherein at least one layer of the organic compound-containing layers contains at least one compound selected from the group consisting of the condensed polycyclic compounds according to claim 1.

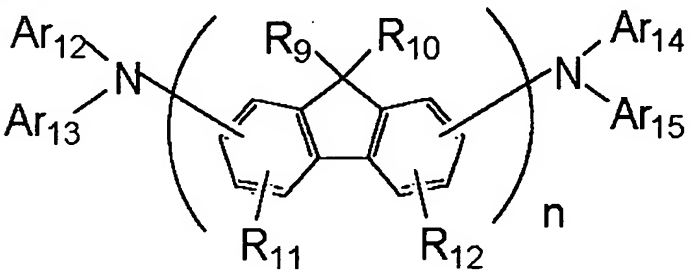
10. An organic light-emitting device comprising a pair of electrodes consisting of an anode and a cathode and one or a plurality of organic compound-containing layers sandwiched between the pair of electrodes, wherein at least one layer of the organic compound-containing layers contains at least one compound selected from the group consisting of the condensed polycyclic compounds according to claim 5.

11. The organic light-emitting device according to claim 9, wherein at least one layer of the organic compound-containing layers containing the condensed polycyclic compounds is an electron-transporting layer or a light-emitting layer.

12. The organic light-emitting device according to claim 10, wherein at least one layer of the organic compound-containing layers containing the condensed polycyclic compounds is an electron-transporting layer or a light-emitting layer.

13. The organic light-emitting device according

to claim 9, wherein at least one of the layers containing the condensed polycyclic compounds is a light-emitting layer containing a fluorene compound represented by general formula [VIII]:

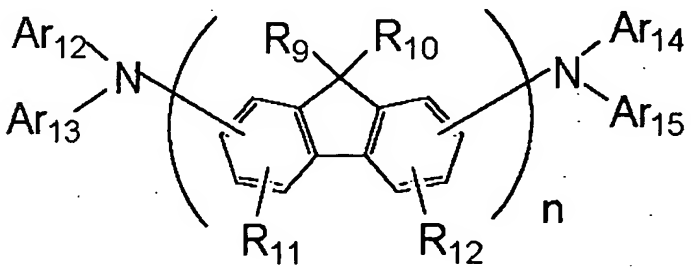


[VIII]

wherein R_9 and R_{10} are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R_9 combined to their respective fluorene structures are the same or different to each other; any pair of R_{10} combined to their respective fluorene structures are the same or different to each other; R_{11} and R_{12} are the same or different and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R_{11} combined to their respective fluorene structures are the same or different to each other; any pair of R_{12} combined to their respective fluorene structures are the same or different to each other;

Ar_{12}, Ar_{13}, Ar_{14} and Ar_{15} are the same or different and are each independently a group selected from the group consisting of aromatic, heterocyclic, condensed polycyclic aromatic and condensed polycyclic heterocyclic, each having no substituent or a substituent, and Ar_{12} and Ar_{14} can be bonded to Ar_{13} and Ar_{15} respectively to form a ring; and n is an integer from 1 to 10.

14. The organic light-emitting device according to claim 10, wherein at least one of the layers containing the condensed polycyclic compounds is a light-emitting layer containing a fluorene compound represented by general formula [VIII]:

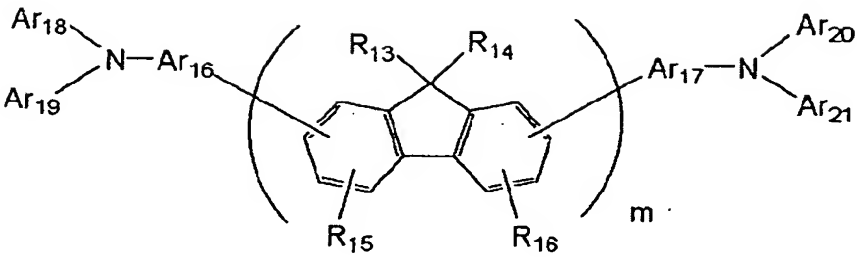


[VIII]

wherein R_9 and R_{10} are the same or different and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R_9 combined to their respective fluorene structures are the same or different to each other; any pair of R_{10} combined

to their respective fluorene structures are the same or different to each other; R_{11} and R_{12} are the same or diffenrent and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R_{11} combined to their respective fluorene structures are the same or different to each other; any pair of R_{12} combined to their respective fluorene structures are the same or different to each other; Ar_{12}, Ar_{13}, Ar_{14} and Ar_{15} are the same or different and are each independently a group selected from the group consisting of aromatic, heterocyclic, condensed polycyclic aromatic and condensed polycyclic heterocyclic, each having no substituent or a substituent, and Ar_{12} and Ar_{14} can be bonded to Ar_{13} and Ar_{15} respectively to form a ring; and n is an integer from 1 to 10.

15. The organic light-emitting device according to claim 9, wherein at least one of the layers containing the condensed polycyclic compounds is a light-emitting layer containing a fluorene compound represented by general formula [IX]:

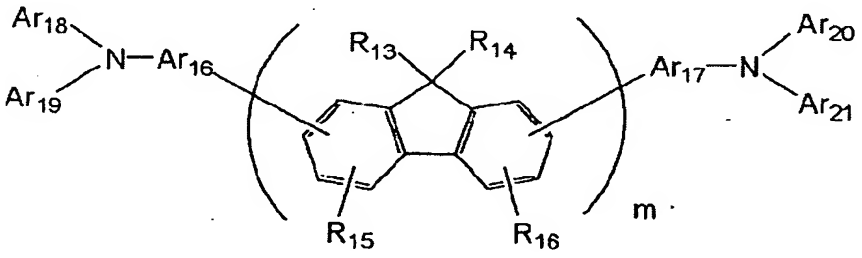


[IX]

wherein R_{13} and R_{14} are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R_{13} combined to their respective fluorene structures are the same or different to each other; any pair of R_{14} combined to their respective fluorene structures are the same or different to each other; R_{15} and R_{16} are the same or different and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R_{15} combined to their respective fluorene structures are the same or different to each other; any pair of R_{16} combined to their respective fluorene structures are the same or different to each other; Ar_{16} and Ar_{17} are the same or different and are each independently a divalent group selected from the group consisting of divalent aromatic and divalent

heterocyclic, each having no substituent or a substituent; Ar_{18}, Ar_{19}, Ar_{20} and Ar_{21} are the same or different and are each independently a group selected from the group consisting of aromatic, heterocyclic, condensed polycyclic aromatic and condensed polycyclic heterocyclic, each having no substituent or a substituent, and Ar_{18} and Ar_{20} can be bonded to Ar_{19} and Ar_{21} respectively to form a ring; and m is an integer from 1 to 10.

16. The organic light-emitting device according to claim 10, wherein at least one of the layers containing the condensed polycyclic compounds is a light-emitting layer containing a fluorene compound represented by general formula [IX]:



[IX]

wherein R_{13} and R_{14} are the same or different and are each independently hydrogen or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R_{13} combined to their

respective fluorene structures are the same or different to each other; any pair of R_{14} combined to their respective fluorene structures are the same or different to each other; R_{15} and R_{16} are the same or different and are each independently hydrogen, halogen, cyano or a group selected from the group consisting of alkyl, aralkyl, aryl and heterocyclic, each having no substituent or a substituent; any pair of R_{15} combined to their respective fluorene structures are the same or different to each other; any pair of R_{16} combined to their respective fluorene structures are the same or different to each other; Ar_{16} and Ar_{17} are the same or different and are each independently a divalent group selected from the group consisting of divalent aromatic and divalent heterocyclic, each having no substituent or a substituent; Ar_{18}, Ar_{19}, Ar_{20} and Ar_{21} are the same or different and are each independently a group selected from the group consisting of aromatic, heterocyclic, condensed polycyclic aromatic and condensed polycyclic heterocyclic, each having no substituent or a substituent, and Ar_{18} and Ar_{20} can be bonded to Ar_{19} and Ar_{21} respectively to form a ring; and m is an integer from 1 to 10.